

App. Ser. No.: 10/632,676
Atty. Doc. No.: D02993

CLAIMS

1. (Presently amended) A method for transmitting timing critical data over a network that is also carrying Internet Protocol traffic comprising:
 - transmitting the timing critical data directly to a media access control layer;
 - maintaining a timing relationship of the timing critical data throughout the media access control layer to a scheduler; and
 - scheduling transmission of the timing critical data by using information embedded into the timing critical data and the Internet Protocol traffic in a single scheduler.
2. (Original) The method according to claim 1, wherein the timing critical data comprises an MPEG video stream.
3. (Original) The method according to claim 1, wherein the timing critical data comprises 1394 traffic including isochronous video data.
4. (Presently amended) An apparatus to receive timing critical data from a first network and to transmit the timing critical data over one or more other networks to one or more client devices comprising:
 - a video bridge to couple to the first network, said video bridge receiving the timing critical data, maintaining a timing relationship of the timing critical data and scheduling transmission of the timing critical data over the one or more networks based upon information embedded into the timing critical data.

App. Ser. No.: 10/632,676

Atty. Doc. No.: D02993

5. (Presently amended) The apparatus according to claim 4, wherein the video bridge comprises:

a MAC receiver outputting the timing critical data; and

one or more MAC transmitters, one for each of the one or more client devices, each MAC transmitter coupled to the MAC receiver, receiving the timing critical data and converting the timing critical data to a format suitable for transmission over one of the one or more other networks.

6. (Original) The apparatus according to claim 5, wherein the video bridge further comprises:

a first physical layer interface to couple to the first network and coupled to the MAC receiver; and

one or more second physical layer interfaces, each second physical layer interface coupled to one of the one or more MAC transmitters, and each second physical layer interface to couple to said one of the one or more other networks.

7. (Original) The apparatus according to claim 5, wherein each of the one or more MAC transmitters comprises:

a timing circuit to adjust timing resulting from any filtering and to add additional timing information to adjust for latency and jitter introduced by said one of the one or more other networks;

App. Ser. No.: 10/632,676

Atty. Doc. No.: D02993

a packetizer coupled to the timing circuit to create packets or frames that meet requirements of said one of the one or more other networks; and

a scheduler coupled to the packetizer to schedule access to said one of the one or more other networks.

8. (Original) The apparatus according to claim 7, wherein each of the one or more MAC transmitters further comprises:

a PID filter to receive the timing critical data and to filter out programs that are not required by one of the one or more client devices and outputting the filtered timing critical data to the timing circuit; and

a queue coupled to the scheduler to buffer packets or frames prior to transmission over said one of the one or more other networks.

9. (Original) The apparatus according to claim 5, further comprising one or more additional MAC receivers, one for each of the one or more client devices, each of the one or more additional MAC receivers disposed between one of the one or more other networks and one of the one or more client devices, wherein each of the one of more additional MAC receivers comprises:

a depacketizer to convert incoming packets to a format suitable for the timing critical data;

a timing circuit coupled to the depacketizer to restore the timing critical data based on bits added by a timing circuit in the one or more MC transmitters; and

App. Ser. No.: 10/632,676
Atty. Doc. No.: D02993

a queue coupled to the depacketizer to buffer incoming packets from said one of the one or more other networks before passing the incoming packets to the depacketizer.

10. (Other) The apparatus according to claim 4, wherein the one or more client devices comprises at least two client devices, and the video bridge transmits an identical copy of the timing critical data to each of the at least two client devices.

11-25. (Cancelled)

21. (Presently amended) An apparatus for transmitting timing critical data from a first network over one or more other networks to one or more client devices comprising:

a video bridge coupled to the first network and receiving the timing critical data, maintaining a timing relationship of the timing critical data, scheduling transmission of the timing critical data over the one or more other networks based upon information embedded in the timing critical data, and outputting a television signal; and

a television coupled to the video bridge to receive the television signal from the video bridge.

22. (Original) The apparatus according to claim 21, wherein the video bridge comprises:

a MAC receiver outputting the timing critical data;

a decoder coupled to the MAC receiver and the television and converting the timing critical data to a television signal; and

App. Ser. No.: 10/632,676

Atty. Doc. No.: D02993

a MAC transmitter receiving the timing critical data and converting the timing critical data to a format suitable for transmission over the network.

23-28. (Cancelled)